

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (withdrawn) A G protein-coupled receptor encoded by an amino acid sequence of SEQ.ID.NO.:2.
2. (withdrawn) A non-endogenous, constitutively activated version of the G protein-coupled receptor of claim 1.
3. (withdrawn) A plasmid comprising a vector and the cDNA of SEQ.ID.NO.:1.
4. (withdrawn) A host cell comprising the plasmid of claim 3.
5. (withdrawn) A G protein-coupled receptor encoded by an amino acid sequence of SEQ.ID.NO.:4.
6. (withdrawn) A non-endogenous, constitutively activated version of the G protein-coupled receptor of claim 5.
7. (withdrawn) A plasmid comprising a vector and the cDNA of SEQ.ID.NO.:3.
8. (withdrawn) A host cell comprising the plasmid of claim 7.
- 9.(withdrawn) A G protein-coupled receptor encoded by an amino acid sequence of SEQ.ID.NO.:6.
10. (withdrawn) A non-endogenous, constitutively activated version of the G protein-coupled receptor of claim 9.
11. (withdrawn) A plasmid comprising a vector and the cDNA of SEQ.ID.NO.:5.
12. (withdrawn) A host cell comprising the plasmid of claim 11.
13. (withdrawn) A G protein-coupled receptor encoded by an amino acid sequence of

SEQ.ID.NO.:8.

14. (withdrawn) A non-endogenous, constitutively activated version of the G protein-coupled receptor of claim 13.

15. (withdrawn) A plasmid comprising a vector and the cDNA of SEQ.ID.NO.:7.

16. (withdrawn) A host cell comprising the plasmid of claim 15.

17. (withdrawn) A G protein-coupled receptor encoded by an amino acid sequence of SEQ.ID.NO.:10.

18. (withdrawn) A non-endogenous, constitutively activated version of the G protein-coupled receptor of claim 17.

19. (withdrawn) A plasmid comprising a vector and the cDNA of SEQ.ID.NO.:9.

20. (withdrawn) A host cell comprising the plasmid of claim 19.

21. (withdrawn) A G protein-coupled receptor encoded by an amino acid sequence of SEQ.ID.NO.:12.

22. (withdrawn) A non-endogenous, constitutively activated version of the G protein-coupled receptor of claim 21.

23. (withdrawn) A plasmid comprising a vector and the cDNA of SEQ.ID.NO.:11.

24. (withdrawn) A host cell comprising the plasmid of claim 23.

25. (withdrawn) A G protein-coupled receptor encoded by an amino acid sequence of SEQ.ID.NO.:14.

26. (withdrawn) A non-endogenous, constitutively activated version of the G protein-coupled receptor of claim 25.

27. (withdrawn) A plasmid comprising a vector and the cDNA of SEQ.ID.NO.:13.

28. (withdrawn) A host cell comprising the plasmid of claim 27.
29. (currently amended) An isolated polynucleotide, wherein said polynucleotide comprises a nucleic acid sequence encoding a [[A]] G protein-coupled receptor ~~encoded by~~ comprising the amino acid sequence of SEQ ID NO:16.
30. (withdrawn) A non-endogenous, constitutively activated version of the G protein-coupled receptor of claim 29.
31. (withdrawn) A plasmid comprising a vector and the cDNA of SEQ.ID.NO.:15.
32. (withdrawn) A host cell comprising the plasmid of claim 31.
33. (withdrawn) A G protein-coupled receptor encoded by an amino acid sequence of SEQ.ID.NO.:18.
34. (withdrawn) A non-endogenous, constitutively activated version of the G protein-coupled receptor of claim 33.
35. (withdrawn) A plasmid comprising a vector and the cDNA of SEQ.ID.NO.:17.
36. (withdrawn) A host cell comprising the plasmid of claim 35.
37. (withdrawn) A G protein-coupled receptor encoded by an amino acid sequence of SEQ.ID.NO.:20.
38. (withdrawn) A non-endogenous, constitutively activated version of the G protein-coupled receptor of claim 37.
39. (withdrawn) A plasmid comprising a vector and the cDNA of SE.ID.NO.:19.
40. (withdrawn) A host cell comprising the plasmid of claim 39.
41. (New) An isolated polynucleotide according to claim 29, wherein the G protein-coupled receptor exhibits (a) an activity in thalamus related to sensorimotor processing or arousal and/or (b) an activity in thalamus of increasing an intracellular level of IP3 by activation.

42. (New) An isolated polynucleotide according to claim 1, wherein the nucleic acid sequence is SEQ ID NO:15.
43. (New) An isolated polynucleotide according to claim 42, wherein the G protein-coupled receptor exhibits (a) an activity in thalamus related to sensorimotor processing or arousal and/or (b) an activity in thalamus of increasing an intracellular level of IP3 by activation.
44. (New). An isolated polynucleotide, wherein said polynucleotide comprises a nucleic acid sequence encoding an endogenous human G protein-coupled receptor, said nucleic acid sequence being obtainable by a process comprising performing polymerase chain reaction (PCR) on a human cDNA sample using a primer that consists of the nucleotide sequence set forth in SEQ ID NO:41 and a primer that consists of the nucleotide sequence set forth in SEQ ID NO:42
45. (New) An isolated polynucleotide according to claim 44, wherein the G protein-coupled receptor exhibits (a) an activity in thalamus related to sensorimotor processing or arousal and/or (b) an activity of increasing an intracellular level of IP3 in thalamus by activation.
46. (New). A vector comprising a polynucleotide according to any one of claims 29, or 41 to 45.
47. (New). A vector according to claim 46, wherein said vector is an expression vector.
48. (New). A host cell comprising an expression vector according to claim 47.
49. (New). A host cell according to claim 48, wherein the host cell is mammalian.
50. (New). A mammalian host cell according to claim 49, wherein the mammalian host cell is selected from the group consisting of 293 cell, 293T cell, and COS-7 cell.
51. (New). A host cell according to claim 48, wherein the host cell is a melanophore cell.
52. (New). A process for making a recombinant host cell comprising the steps of:
(a) transfecting an expression vector according to claim 47 into a suitable host cell; and
(b) culturing the host cell under conditions which allow expression of a G protein-coupled receptor from the expression vector.
53. (New). A process according to claim 52, wherein the host cell is mammalian.
54. (New) A process according to claim 53, wherein the mammalian host cell is selected from the group consisting of 293 cell, 293T cell, and COS-7 cell.

55. (New). A process according to claim 52, wherein the host cell is a melanophore cell.
56. (New). An isolated membrane of a recombinant host cell according to claim 52, wherein the isolated membrane comprises the G protein-coupled receptor.